

Figure A shows the element that helps the other element

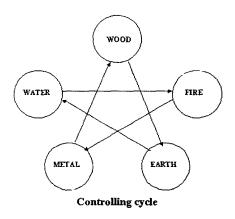


Figure B shows the element that controls the other element

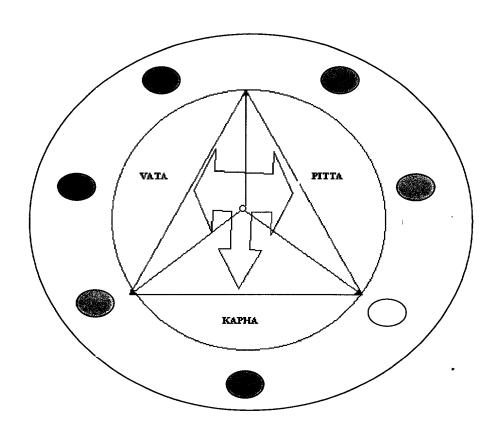
Any imbalance (excess or deficiency) of one element leads to disturbance in other elements and becomes the root cause of a disease. The health of human body is achieved by managing and controlling the above elements in Chinese medicine.

Most of the world traditional philosophies follow the same concept.

Figure 2

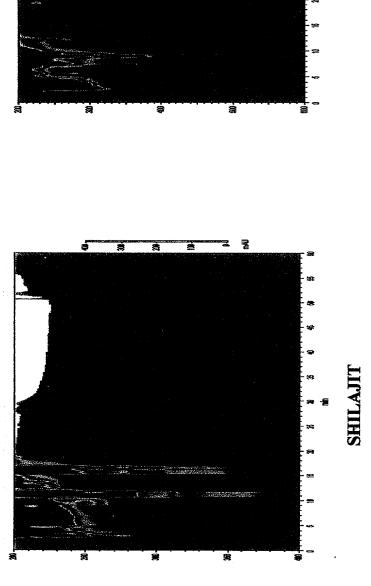
#### Relation of colors with humors

VATA	КАРНА	PITTA



The above diagram shows the effect of colors on the basic humors based on which the medicines of the same colors were selected for vitiating the corresponding humor. The colors of the leaves, flowers, various parts of the plants and the organo-metallic formulations were taken in to consideration to understand the therapeutic efficacy of traditional medicines. The colors of the medicines is due to the chemical properties of the constituents present in it, thus indirectly the chemical properties were used for the therapeutic standardization.

## THE SHILAJIT EXAMPLE





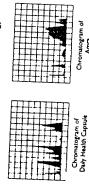
THE CHEMICAL PROFILE IN THE FINGER PRINT SHOWS THE THERAPEUTIC EFFICACY DUE TO THE PRESENCE OF MORE NUMBER OF MOLECULES WITH WIDE CONJUGATIVE PROPERTIES,

GOOD BY EFFICACY

THE MORE IT IS OLD, THE MORE IT WILL BE THERAPEUTICALLY ACTIVE AND MAY ALSO THE CHEMICAL PROFILE VARIES WITH THE AGE OF THE SAMPLE, IT SPENT IN THE EARTH, DEPEND ON THE PLACE OF COLLECTION AND PURIFICATION PROCESS. Figure II I Land was not not an and the

Herbal formulations with the same ingredients depending on the quality and processing of the herbs. Careful selection of herbs, stringent quality control and Chromatographic fingerprinting ensure that the final product delivers the same benefits that have been proven in clinical studies. may differ substantially in safety and efficacy

research and scientific analysis. These products are manufactured according to the rigid standards represents the results of subjecting ancient Ayurvedic knowledge to rigorous modern Each Ayurvedic CONCEPTS formula of modern pharmaceutical technology.



Keep out of the reach of children. Store in a cool, dry place.





#### ipaainh

Each capsule contains: **Yashti-madhu** Amalakı Exts. Amra

Draksha Lavanga

#### Daily Health Capsules

Antistressor · Rejuvenator Amla · Licorice · Natural Zinc

60 CAPSULES

90 mg 90 mg 1.94 mg 120 mg 25 mg ; Garijara Yashad bhasma

leading to chronic fatigue, hypertensism

Pollution and chemicals cause oxidating

damage to the body by the release of the radicals, thereby disturbing normal best

Continued stress disrupts the immuness

Stress has become part of life today.

Relieves stress, mental fatigue, Res

a healthy equilibrium,

25 mg

10.50 mg

unctions.

17.56 mg

Daily Health capsules are non-sedating rich in anti-oxidant vitamins in the fe

of Amra and Garijara (vit.A), Amalaki

(Amla) (vit.C), and Lavanga (Clove),

Dosage:

Godhuma

ö

Natural products provide gradual but 2 capsules twice a day.

long-lasting results. Allow several weeks for full benefits. Mfg.Lic. No.:Al 15-83

(Licorice) and Yashad bhasma (Nater

(Wheatgerm) oil (vit.E). Yashti-madh

Draksha (Grapes) and Godhuma

(Incl. of all taxes) M.R.P.: Rs.60 00

Exp.: 3 yrs. from date of Mfg

B.No.: 90702

July 99

Made in India by:

THE HIMALAYA DRUG CO.

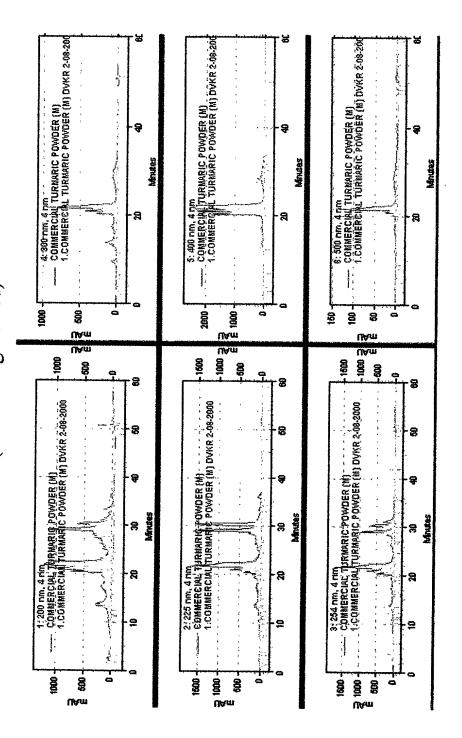
Zinc) are excellent immune-stimula that bolster the body's defence mechans reatment of stress of various origi Clinical trials on the product have proved it to be beneficial in the ceeping you fit and healthy.

Ayurvedic Proprietary Medicine. Completely safe. Non-toxic. NON-SEDATING.

> The chromatographic fingerprint does not give any clear information about the polarity and conjugative properties of the constituents.

# CHROMATOGRAMS OF A COMMERCIAL TURMERIC POWDER AT

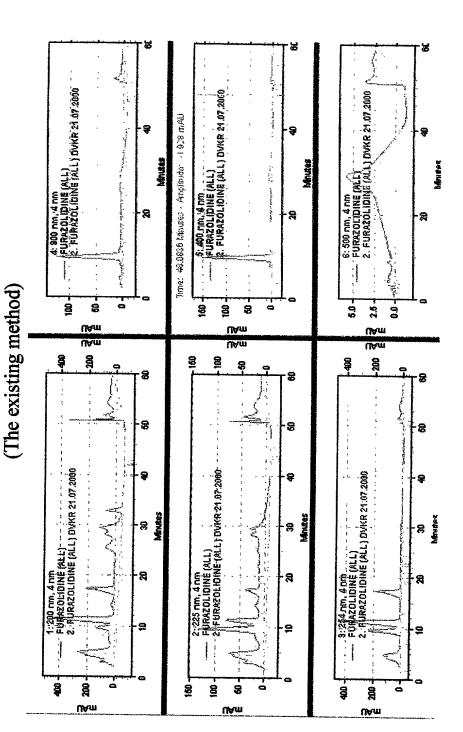
## AT DIFFERENT WAVELENGTHS



CHROMATOGRAMS OF A FURAZOLIDINE MEDICINE

## AT DIFFERENT WAVELENGTHS

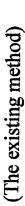


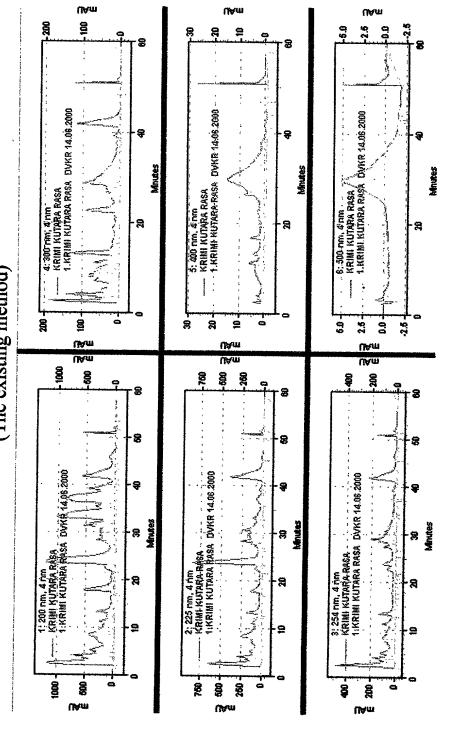


# CHROMATOGRAMS OF A HERBAL FORMULATION

### KRIMIKUTARA RAS

## AT DIFFERENT WAVELENGTHS







# CHROMATOGRAMS OF A HERBOMINERAL MEDICINE SHILAJIT (GOOD BY EFFICACY) AT DIFFERENT WAVELENGTHS

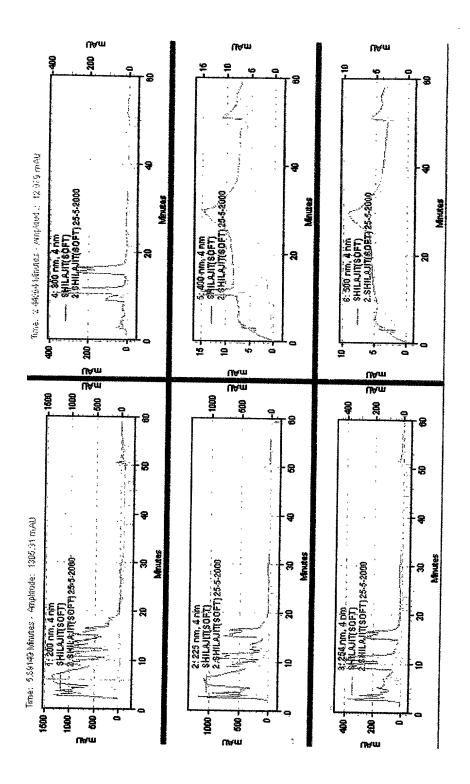
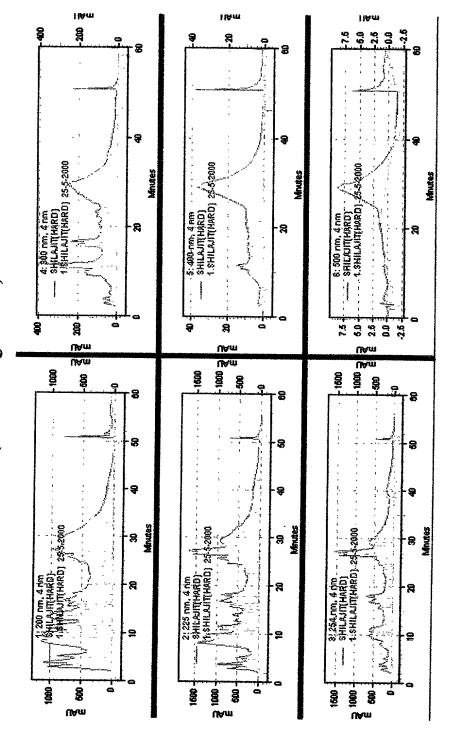


Figure . 9

# CHROMATOGRAMS OF A HERBOMINERAL MEDICINE

## SHILAJIT (POOR BY EFFICACY)

## AT DIFFERENT WAVELENGTHS



# CHROMATOGRAMS OF A HERBAL FORMULATION

#### SURYAVARTI AT DIFFERENT WAVELENGTHS

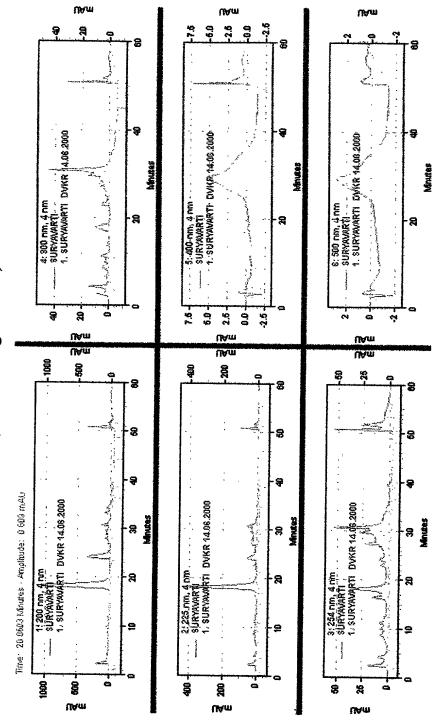
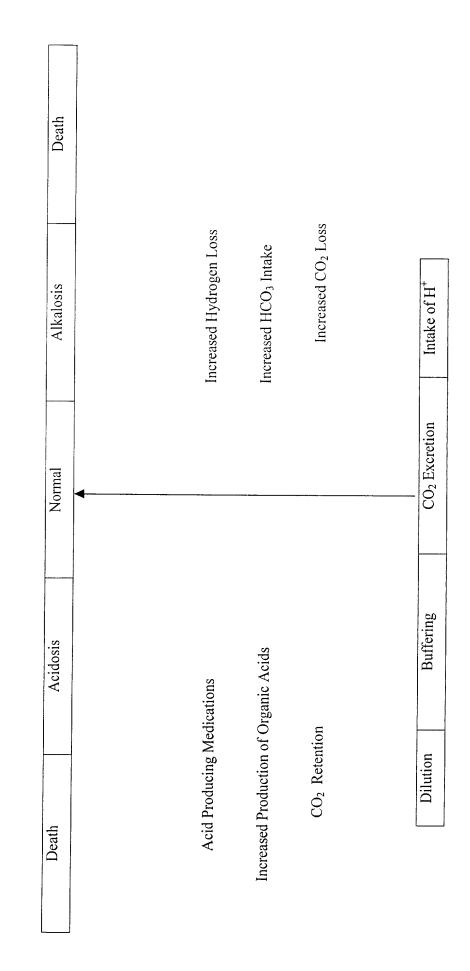
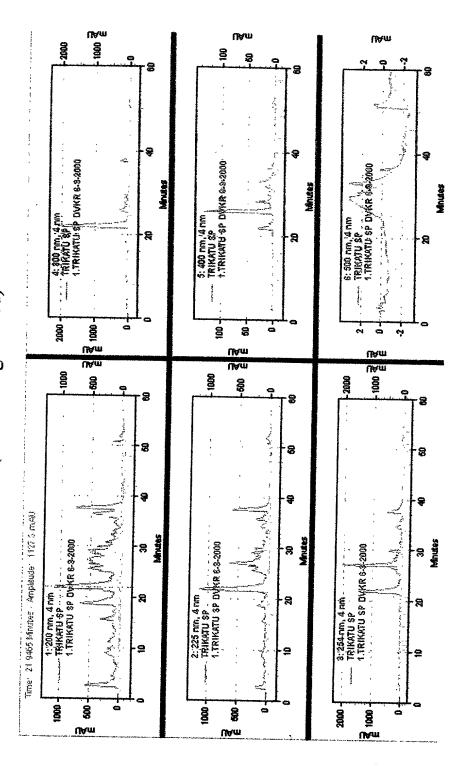


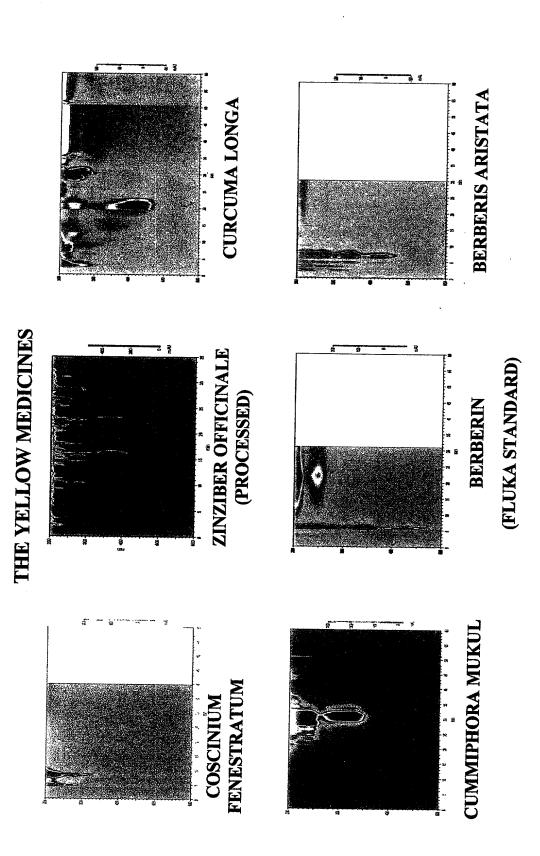
Figure 11: Role of Acidity and Alkalinity in Human Body



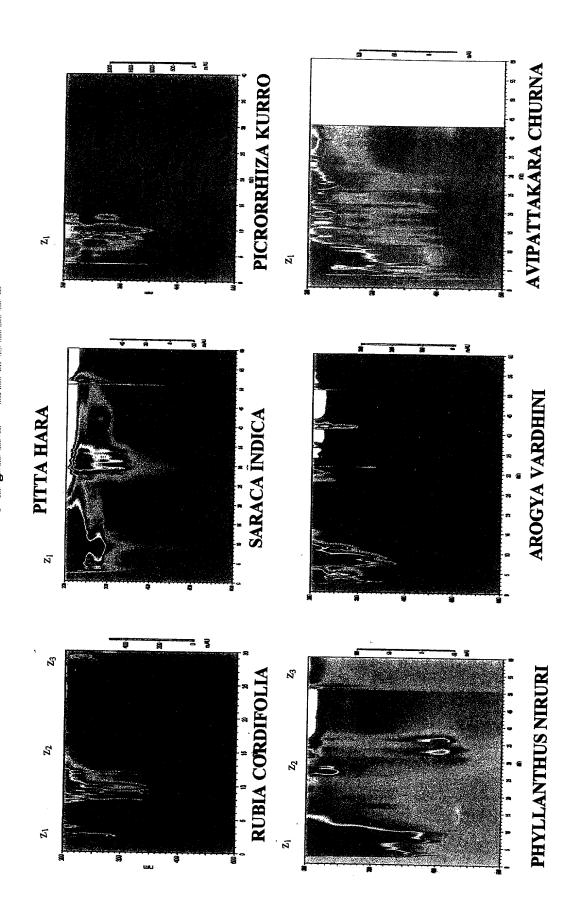


### TRIKTU (A FORMULATION OF PIPPALI, MARICHA AND SHUNTI) CHROMATOGRAMS OF A HERBAL FORMULATION AT DIFFERENT WAVELENGTHS

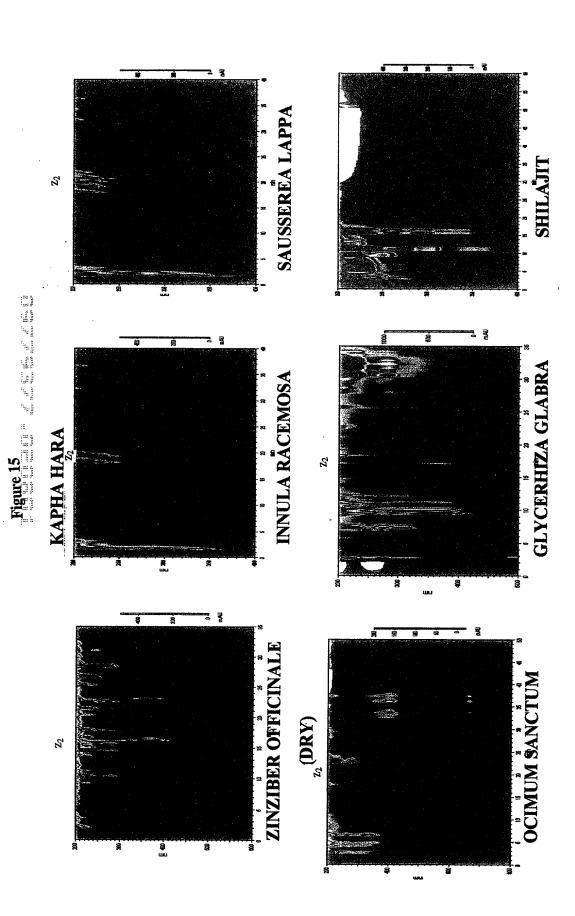




A CLEAR DIFFERENCE IN APPEARANCE MAKING THE IDENTIFICATION MORE EASY. THE FINGERPRINTS OF CONTRAVERSIAL DRUGS (SANDIGDHA DRAVYAS) SHOWS

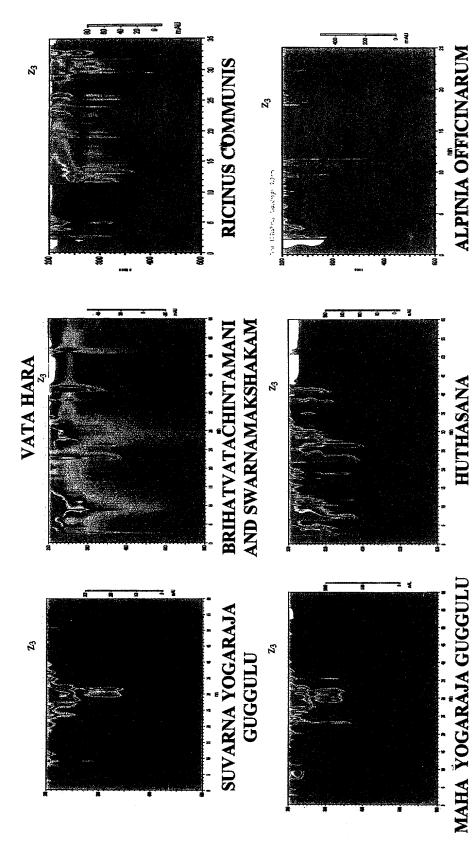


THE PRESENCE OF CONSTITUENTS IN ZONE-1 INDICATES THE SAID EFFICACY OF THE MEDICINES

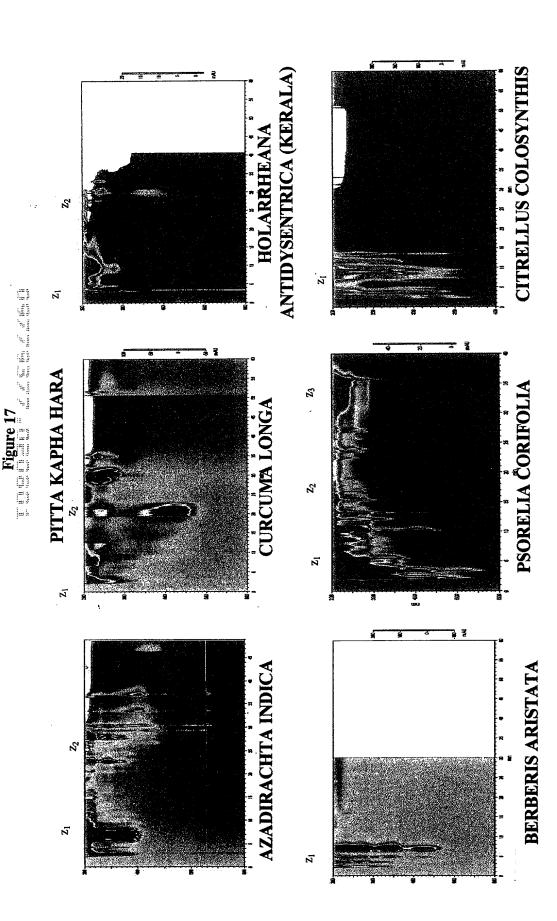


THE PRESENCE OF CONSTITUENTS IN ZONE-2 INDICATES THE SAID EFFICACY OF THE MEDICINES

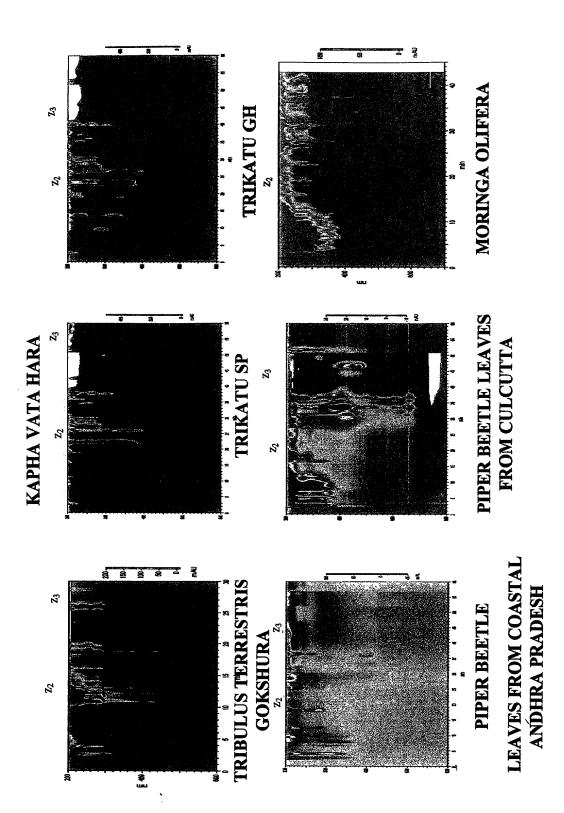




THE PRESENCE OF CONSTITUENTS IN ZONE-3 INDICATES THE SAID EFFICACY OF THE MEDICINES

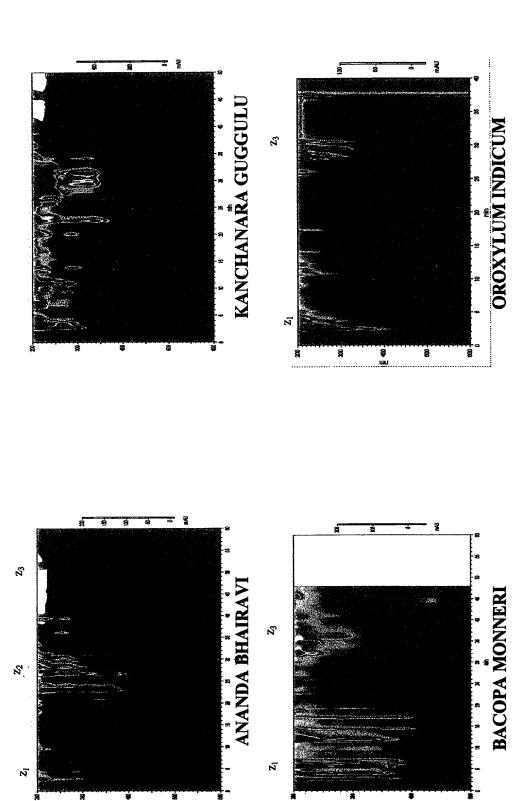


THE PRESENCE OF CONSTITUENTS IN ZONE-1 AND ZONE-2 INDICATES THE SAID EFFICACY OF THE MEDICINES

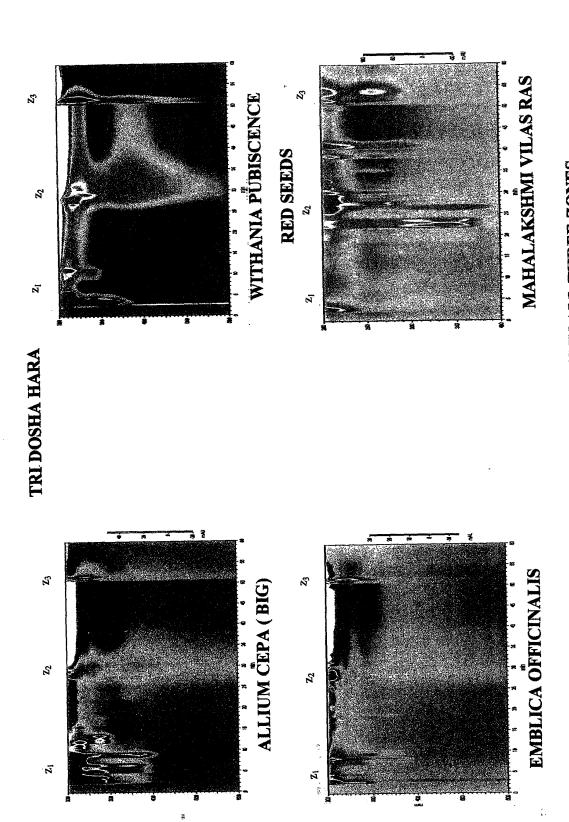


THE PRESENCE OF CONSTITUENTS IN ZONE-2 AND ZONE-3 INDICATES THE SAID EFFICACY OF THE MEDICINES

#### PITTA VATA HARA

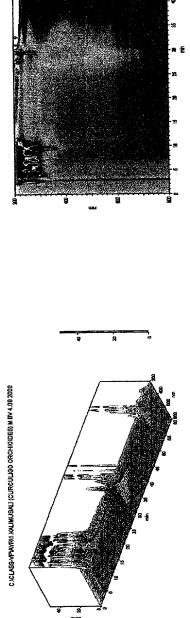


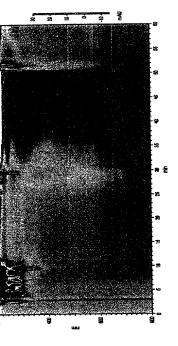
THE PRESENCE OF CONSTITUENTS IN ZONE-1 AND ZONE-3 INDICATES THE SAID EFFICACY OF THE MEDICINES



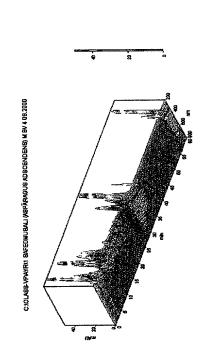
THE PRESENCE OF CONSTITUENTS IN ALL THREE ZONES INDICATES THE SAID EFFICACY OF THE MEDICINES

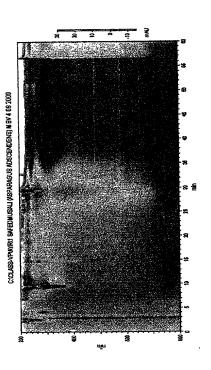
MUSALI - A TRIDOSHA HARA MEDICINE Figure:





# FINGER PRINTS OF CURCULIGO ORCHIODIS (KALIMUSALI)





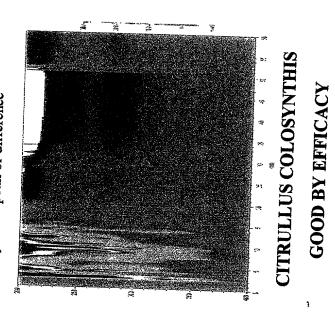
FINGER PRINTS OF ASPARAGUS ADESCENDENS (SAFED MUSALI)

#### Figure 22

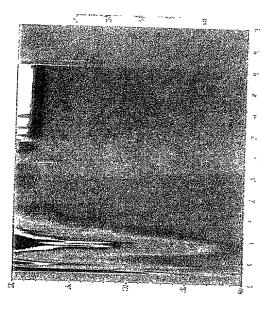
## CITRULLUS COLOSYNTHIS

### (HOMOEO MEDICINE)

Very bitter peak of difference



Light in bitterness absent

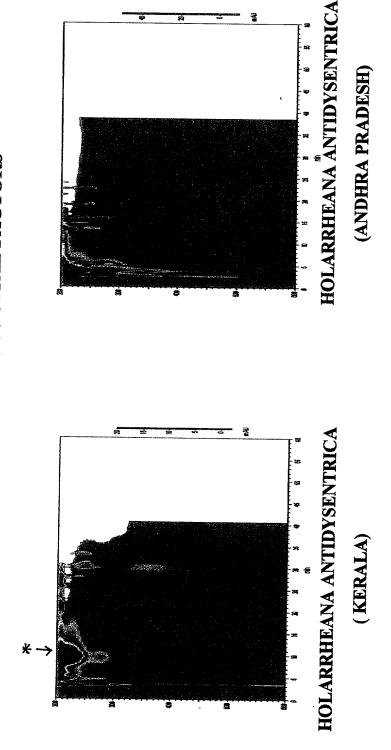


### CITRULLUS COLOSYNTHIS POOR BY EFFICACY

THE LACK OF SOME CONSTITUENTS IN THE FINGER PRINT SHOWS THE USE OF THIS METHOD FOR THE STANDARDIZATION OF EXTRACTION PROCESS OF HOMOEO MOTHER TINCTURES FROM PLANTS

This supports the claim of taste identification used for therapeutic standardization,

## INFLUENCE OF ECOLOGICAL FACTORS

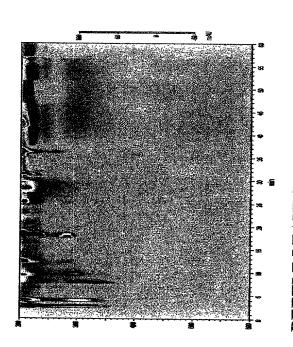


## THE FINGER PRINTS SHOWS THE INFLUENCE OF ECOLOGICAL FACTORS ON THE CHEMICAL CONSTITUENTS OF THE PLANT MATERIAL OF

## DIFFERENT TROPICAL ZONES OF THE COUNTRY.

This constituent is basic in nature because the basic or alkaline amines elutes stretched or elongated . Acid compounds elute fast like a sharp peak.

## PIPER BEETLE EXAMPLE



## BEETLE LEAVES FROM COASTAL ANDHRA PRADESH

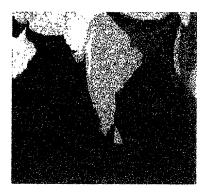


Aurones and Chareones (flavonoids) are antioxidants. A combinatorial library of can be seen. THE FLAVONOIDS PRESENT IN THE TIME RANGE OF 30 - 40 MIN SHOWS THE INFLUENCE OF GENOTYPIC, PHENOTYPIC VARIATIONS AND ECOLOGICAL FACTORS ON THE CHEMICAL CONSTITUENTS OF THE PLANT MATERIAL OF DIFFERENT

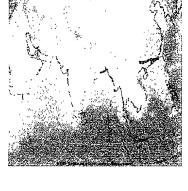
TROPICAL ZONES OF THE COUNTRY

Figure 25

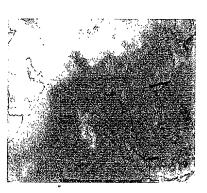
Figure: Indian Eco-regions



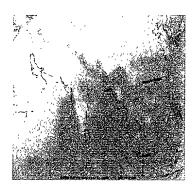
India-Eco-regions



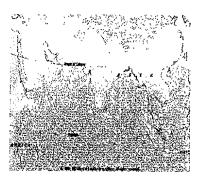
India-Precipitations-January



**India-Precipitation-July** 



India-India precipitation -Annual



India-Temparature-January

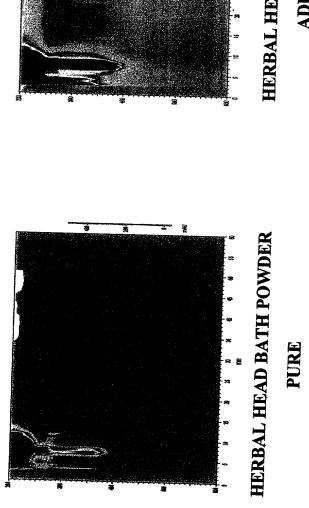


India-Climate map

The above satellite images show that India has more than one tropical zone. The variations in the seasons will have an impact on the chemical constituents of the herbal medicines of different parts of the country. This applies for the entire world. This emphasizes the need of standardization of herbal medicines.

Figure 26

## HERBAL HEAD BATH POWDERS



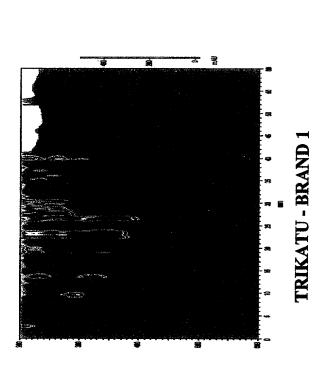


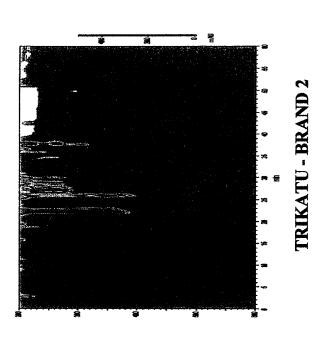
## THE ABOVE FINGER PRINTS SHOW, THE ADULTERATION OF DETERGENTS IN THE SAID HERBAL COSMETIC PRODUCT. THUS FINGER PRINTING HELPS TO MONITOR THE ADULTERATIONS IN VARIOUS COMMERCIAL HERBAL PRODUCTS

Constituents at 35-40 minutes are highly basic and soapy in nature. The pure detergent sample are eluting at the same time.

### Figure 27

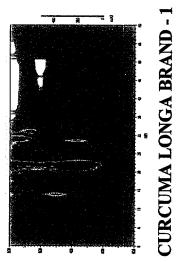
## HERBAL FORMULATIONS OF DIFFERENT BRANDS



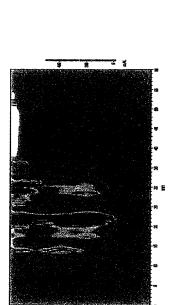


THE ABOVE EXAMPLE OF TRIKATU SHOWS DIFFERENCE IN THE ASSAY AND VARIATIONS IN THE CHEMICAL CONSTITUENTS. THE REASON MAY BE DUE TO THE VARIATIONS IN THE SINGLE MEDICINES USED TO PREPARE THE FORMULATIONS.

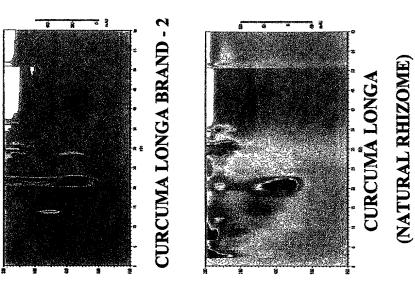
### TURMERIC EXAMPLE





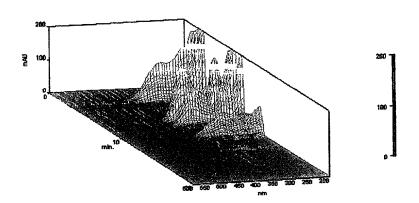


**CURCUMA LONGA BRAND - 3** 



THE COMMON PEAKS AT 20 MIN IN NATURAL AND COMMERCIAL PRODUCTS INDICATES THE PRESENCE OF THE YELLOW COLORED MOLECULES IN ALL. FORMS HELPS IN THE QUALITY CONTROL OF THE NATURAL SUBSTANCES. THE FINGER PRINTS OF THE SAME HERBAL PRODUCT IN DIFFERENT

Figure 29



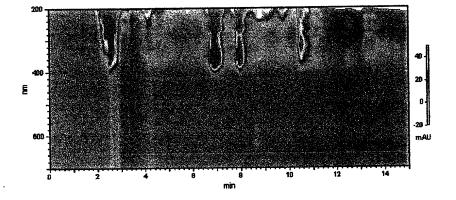
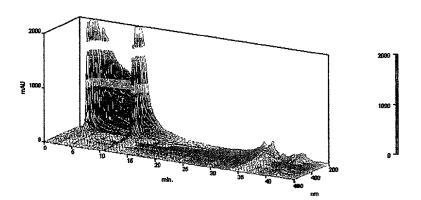


Figure 30



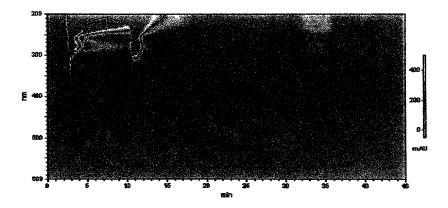
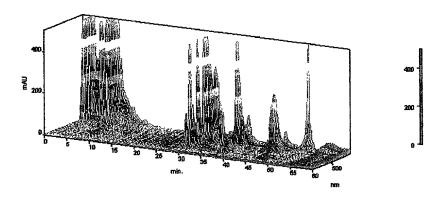


Figure 31



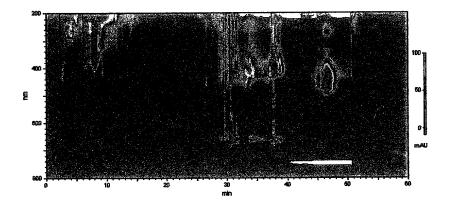
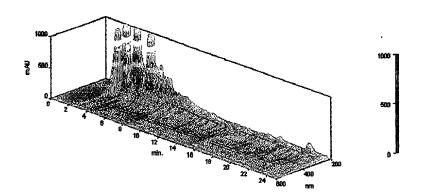


Figure 32



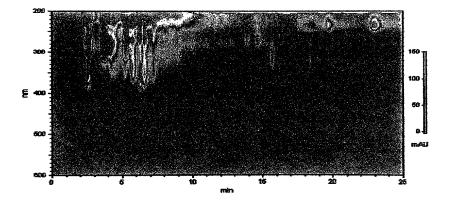
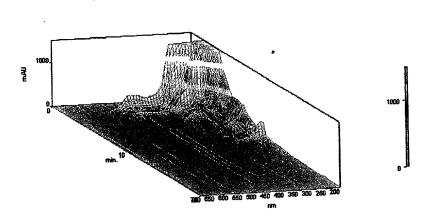


Figure 33



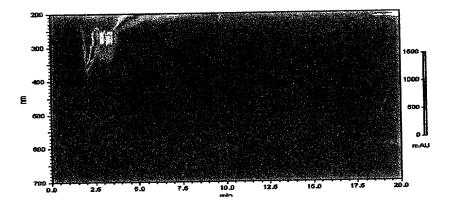
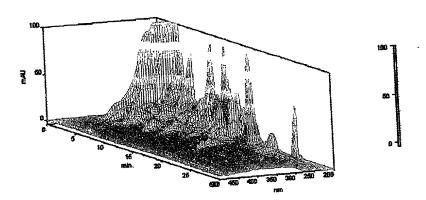


Figure 34



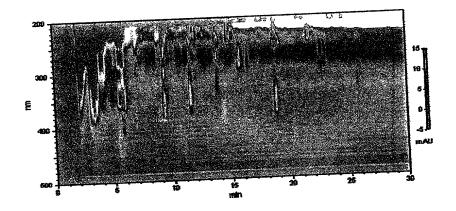
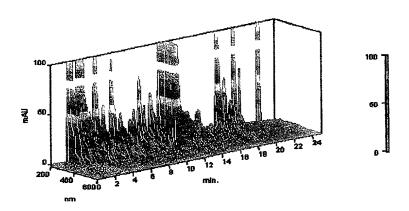


Figure 35



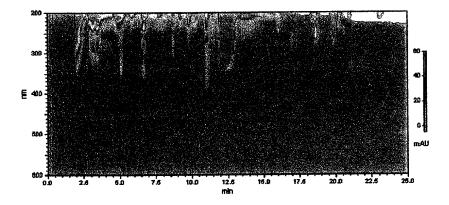
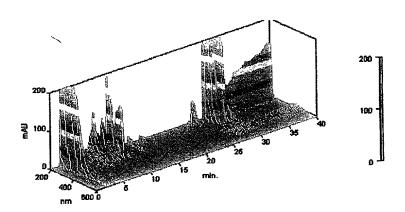


Figure 36



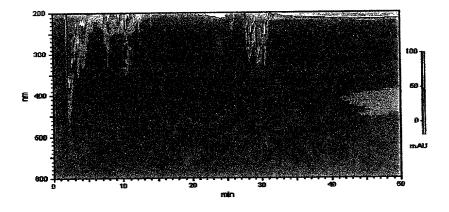
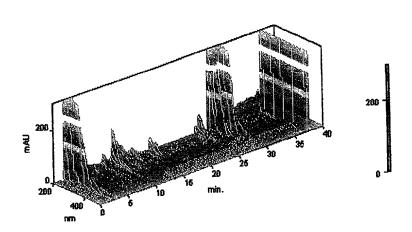


Figure 37



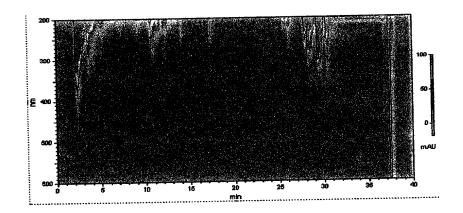
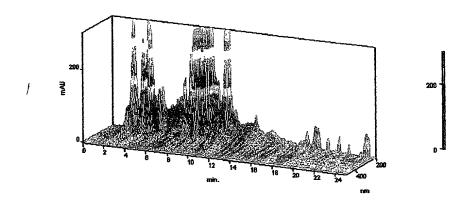


Figure 38



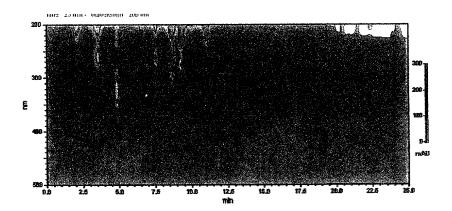
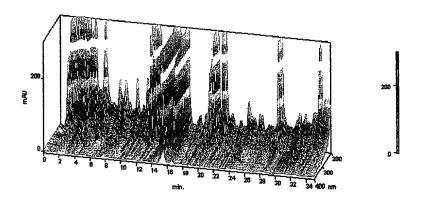


Figure 39



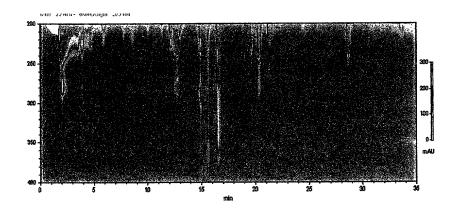
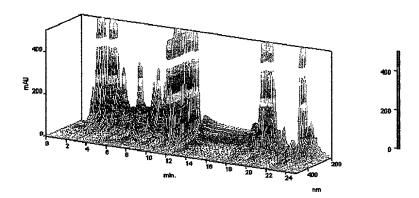


Figure 40



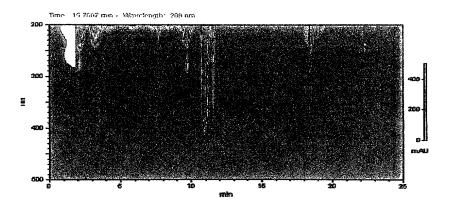
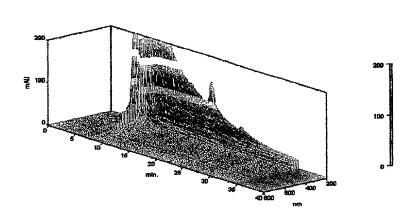


Figure 41



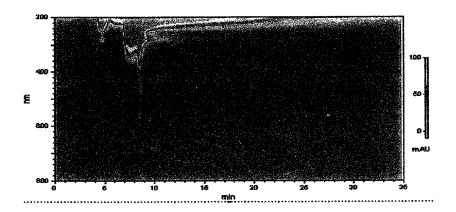
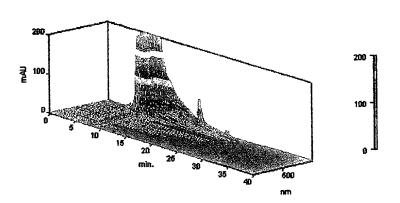


Figure 42



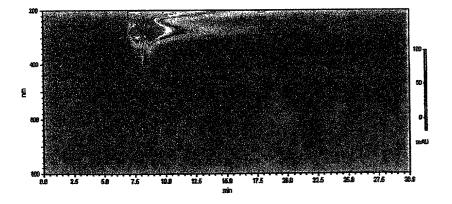
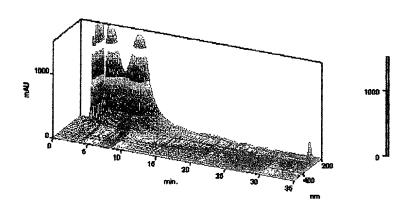


Figure 43



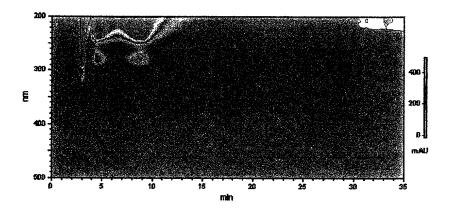
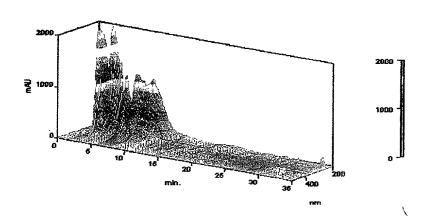


Figure 44



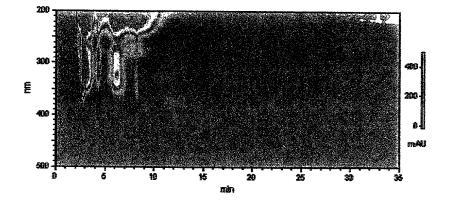
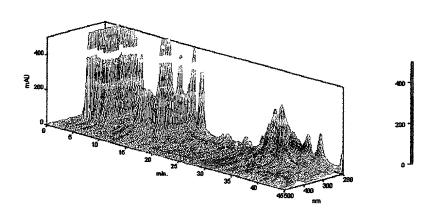


Figure 45



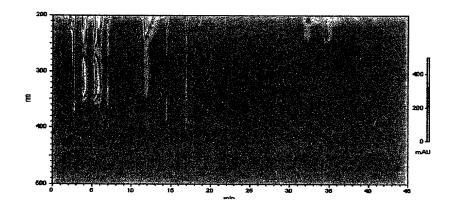
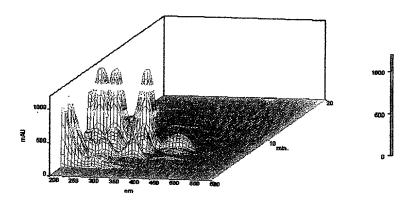


Figure 46



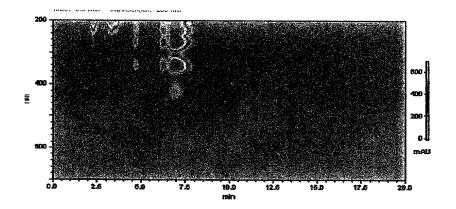
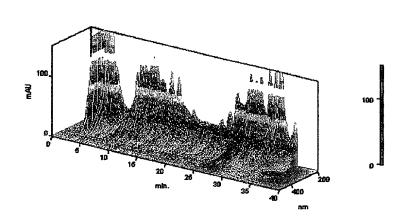
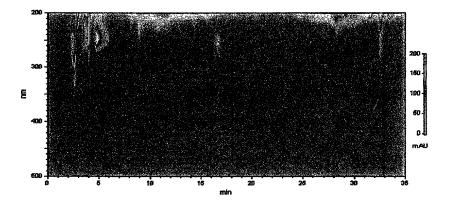
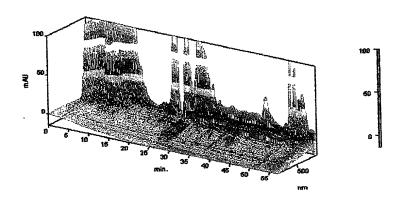
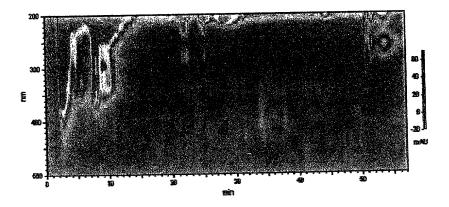


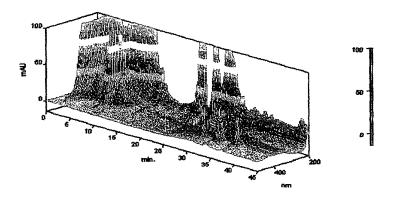
Figure 47

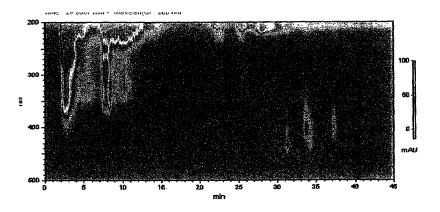


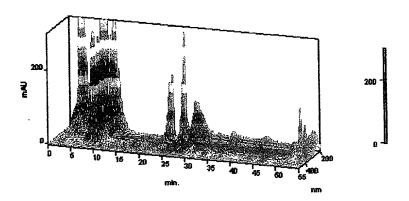












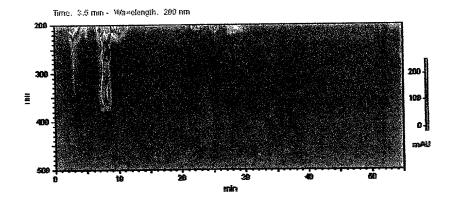
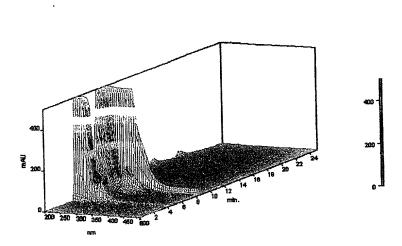
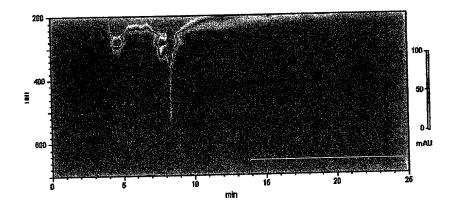
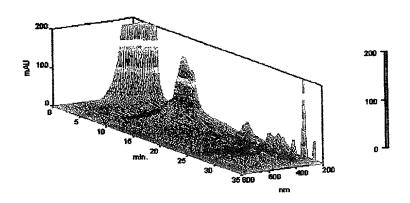


Figure 51







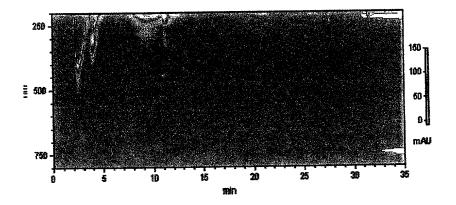
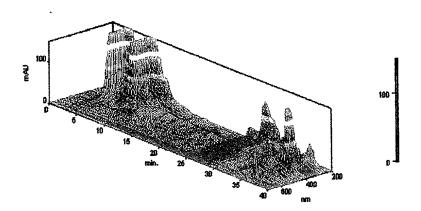


Figure 53



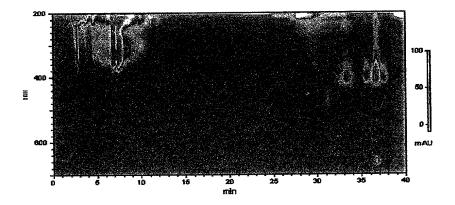
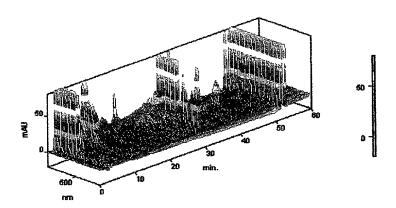


Figure 54



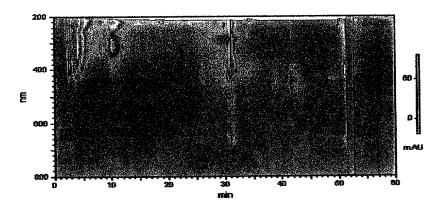
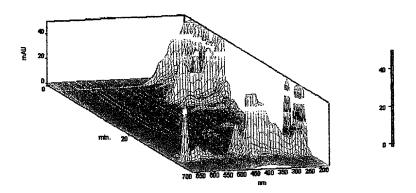


Figure 55



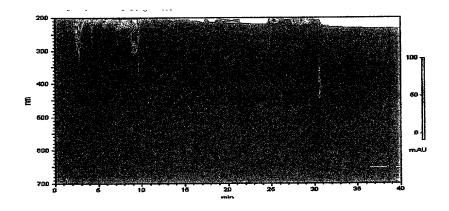
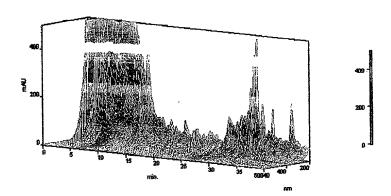


Figure 56



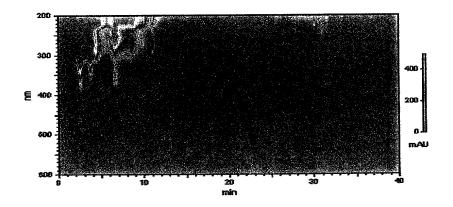
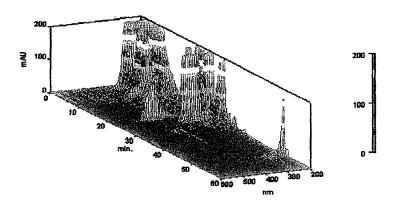


Figure 57



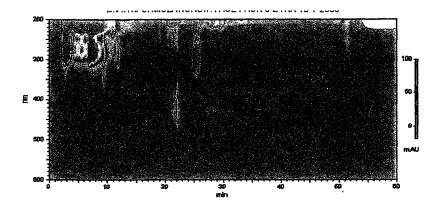
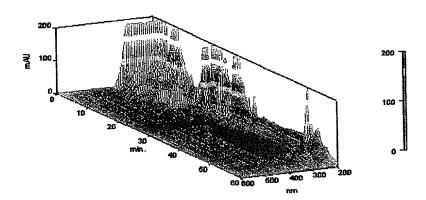


Figure 58



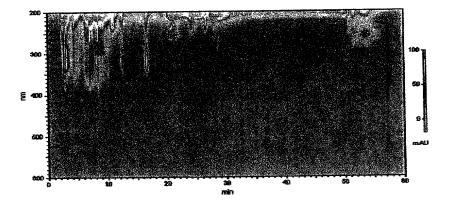
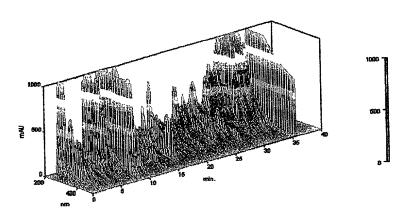


Figure 59



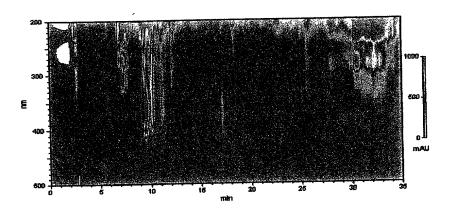
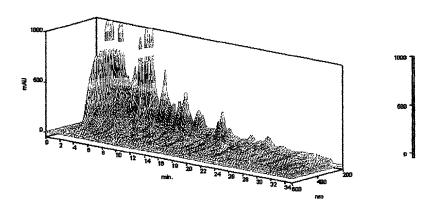


Figure 60



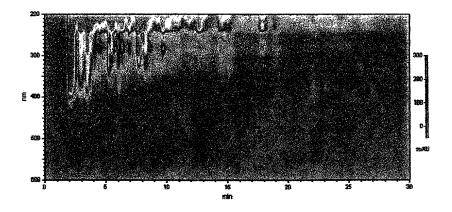
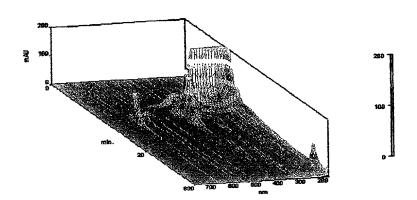


Figure 61



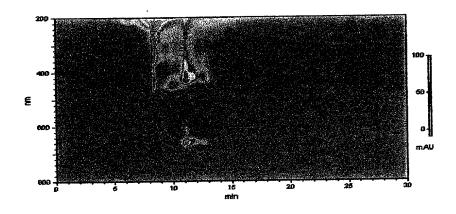
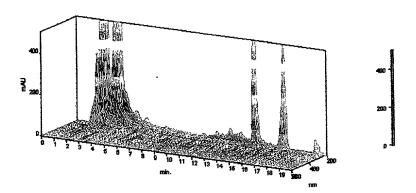
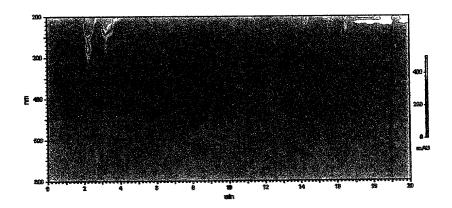
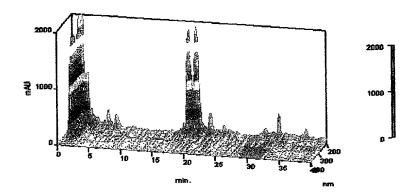


Figure 62





## FIGURE 63



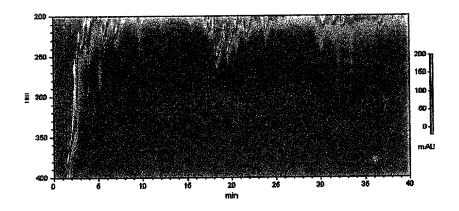
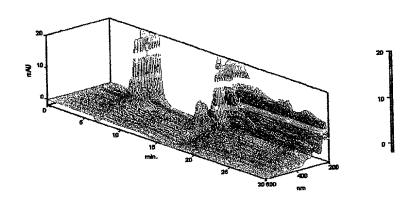


Figure 64



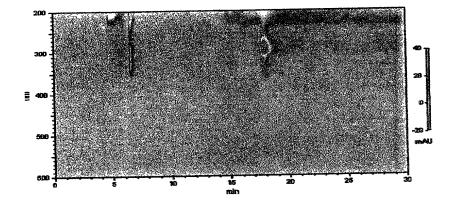
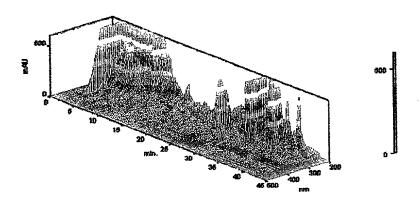


Figure 65



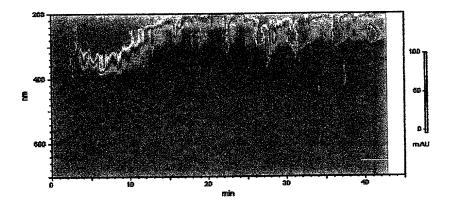
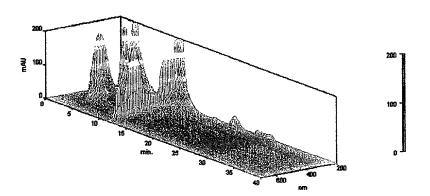


Figure 66



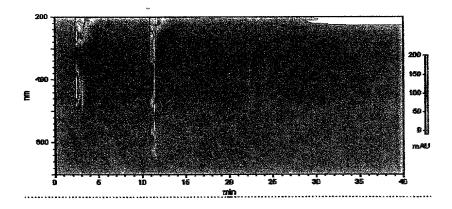
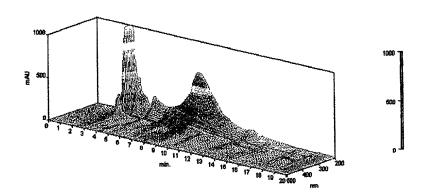


Figure 67



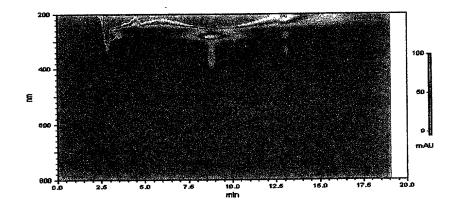
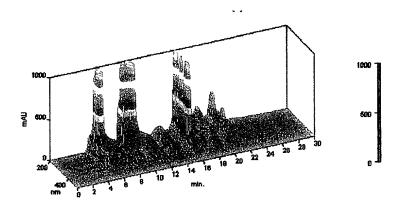


Figure 68



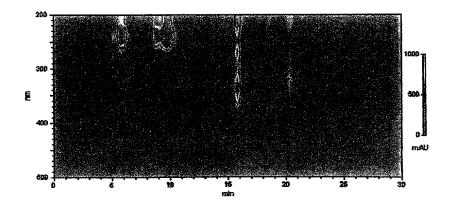
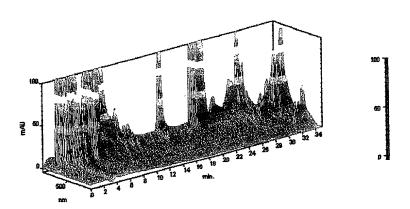


Figure 69



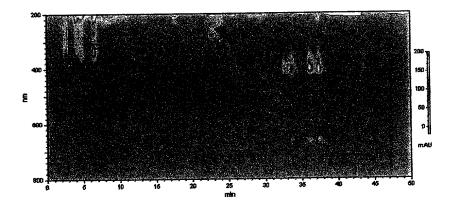
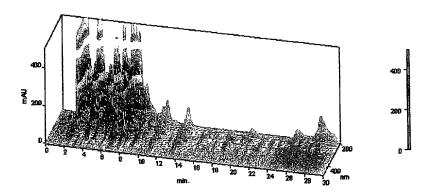


Figure 70



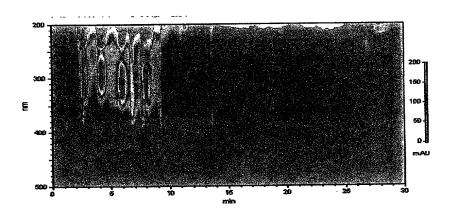
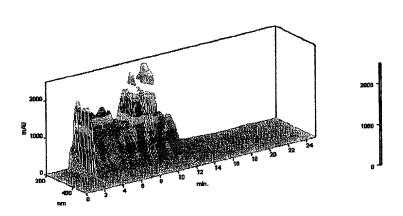


Figure 71



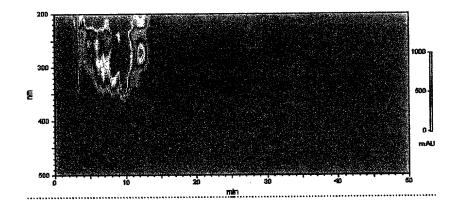
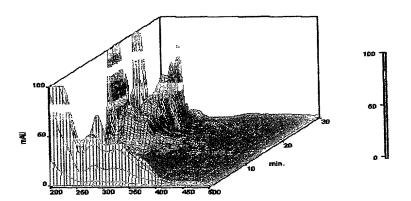


Figure 72



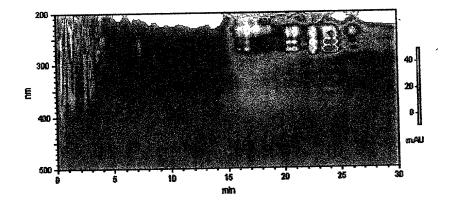
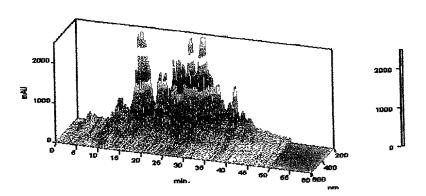


Figure 73



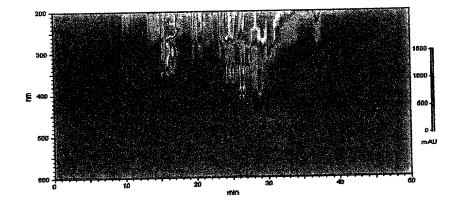
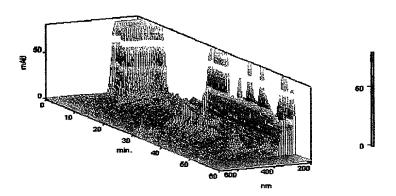


Figure 74



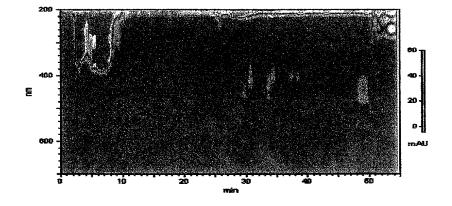
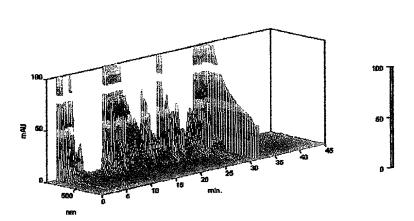


Figure 75



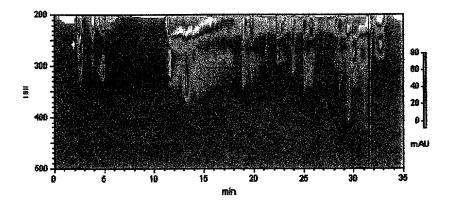
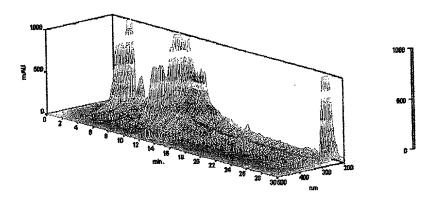
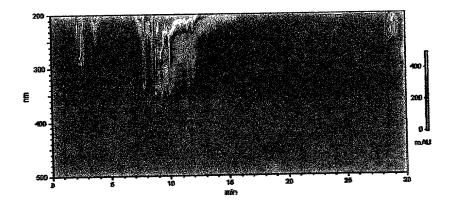


Figure 76





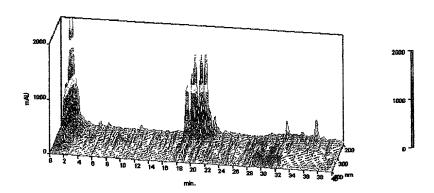


Figure 77

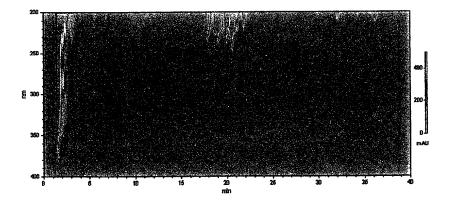
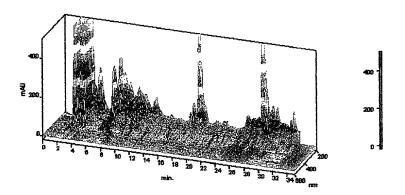


Figure 78



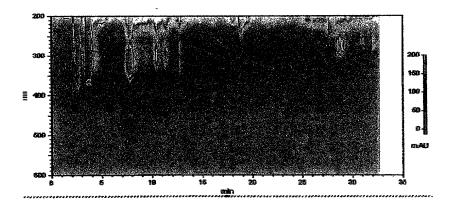
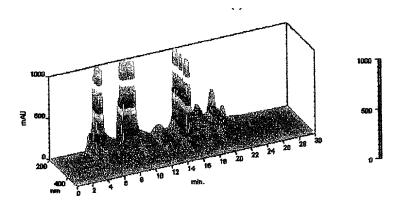


Figure 79



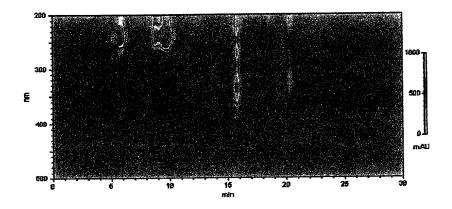
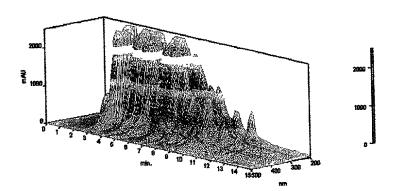


Figure 80



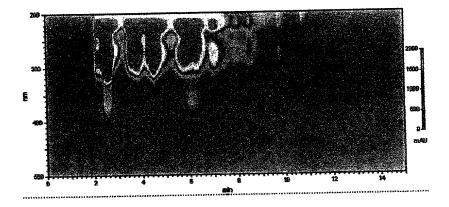
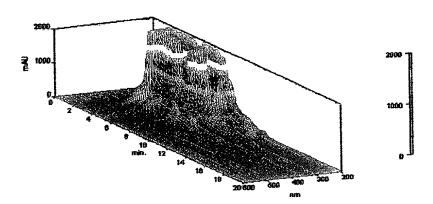


Figure 81



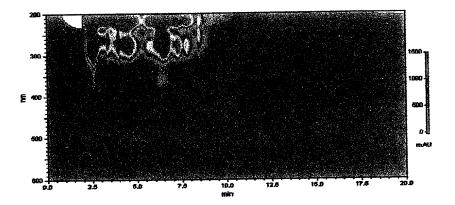
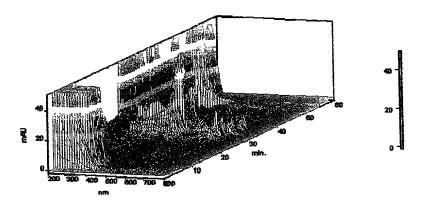


Figure 82



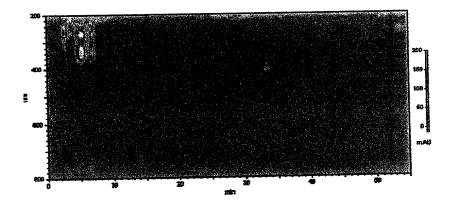
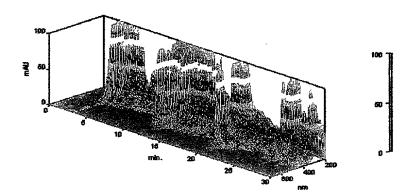


Figure 83



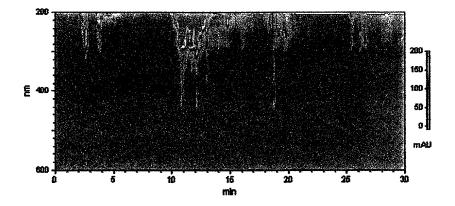
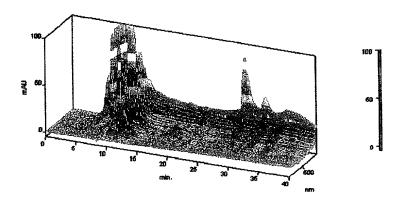


Figure 84



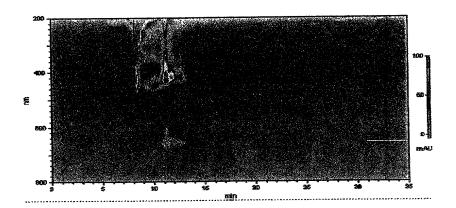
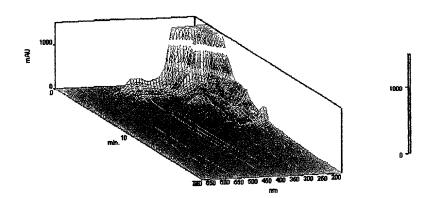


Figure 85



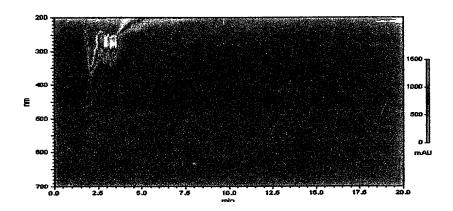
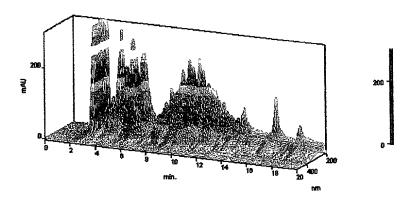
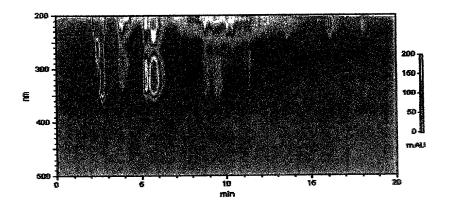
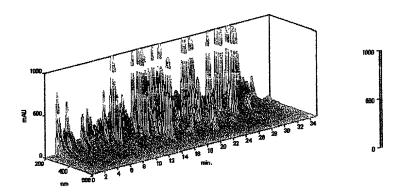


Figure 86







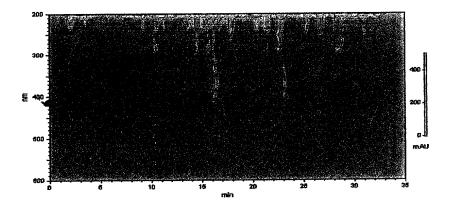
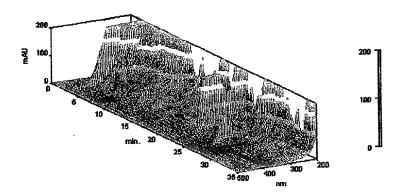


Figure 88



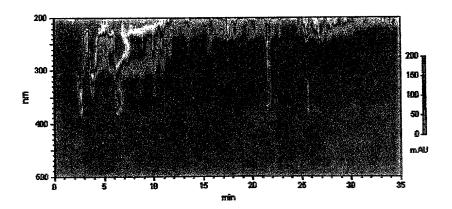
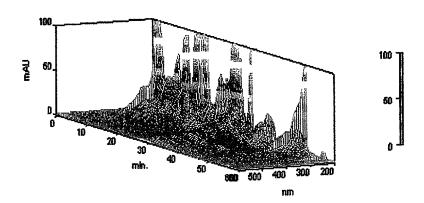


Figure 89



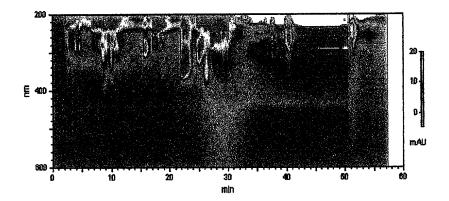
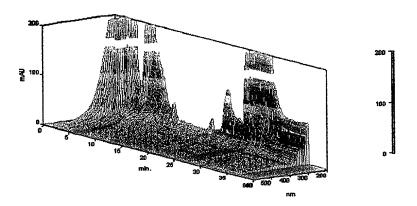


Figure 90



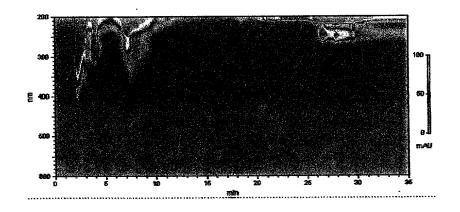
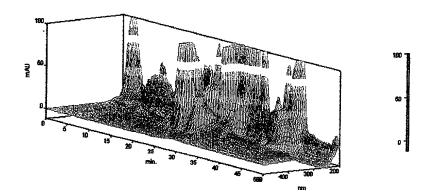


Figure 91



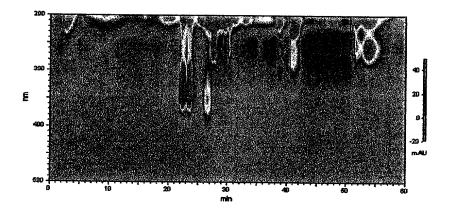
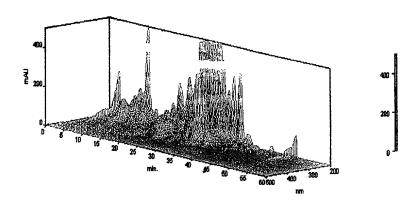


Figure 92



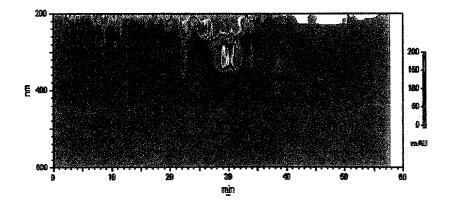
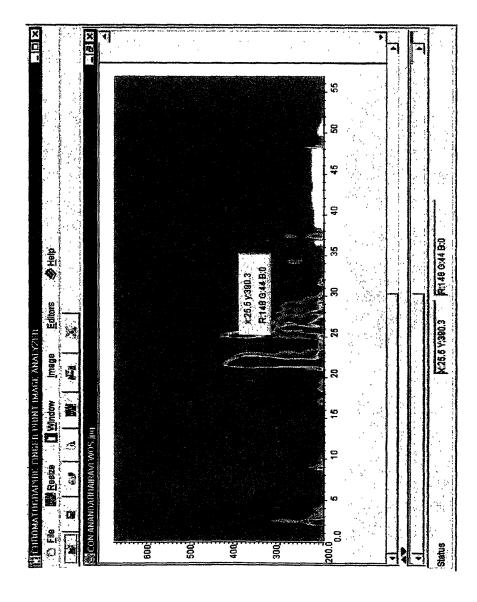


Figure 93

## SOFTWARE TO FEED FOR A BAR CODING SOFTWARE IMAGES WITH BAR CODE VALUES GIVEN BY THE

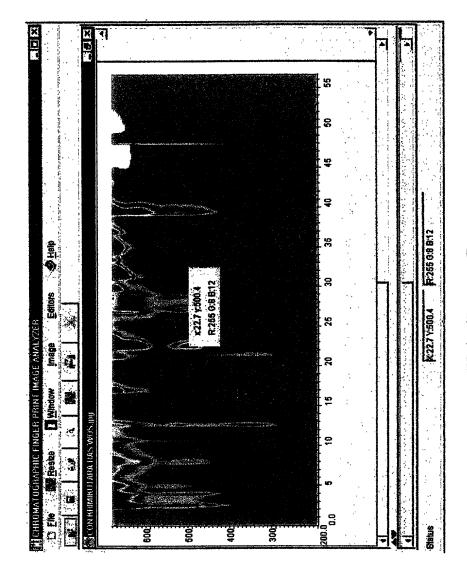


### Anandabhairavi Ras

Y right clicking the image software is able to show the coordinates on the box near the peak. The same is shown in down tool bar. These will be exported to barcoding software

Figure 94

## SOFTWARE TO FEED FOR A BAR CODING SOFTWARE IMAGES WITH BAR CODE VALUES GIVEN BY THE



### Krimikutara Ras

Same mechanism as explained in Figure 93

X25.5Y390.3R148G44B0

### ANANDABHAIRAVI RAS

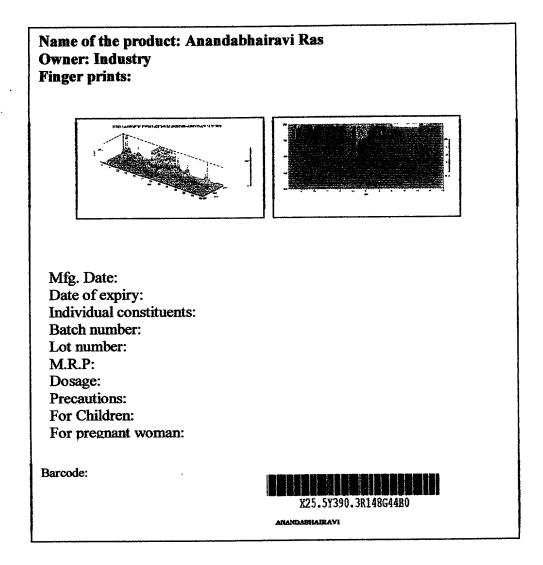
Barcode generated for specified coordinates.



X22.7Y500.4R255G8B12

KRIMIKUTARA RAS

Figure 97



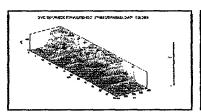
### Display Window For Anandabhairavi Ras

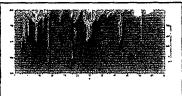
Display windows for all the medicines will be done. This becomes a database for ERP CRM application.

Figure 98

Name of the product: Krimikutara Ras

Owner: Industry Finger prints:





Mfg. Date: Date of expiry: Individual constituents:

Batch number:

Lot number:

M.R.P:

Dosage:

Precautions:

For Children:

For pregnant woman:

Barcode:

KREMIKUTARA RAS

Display Window For Krimikutara Ras

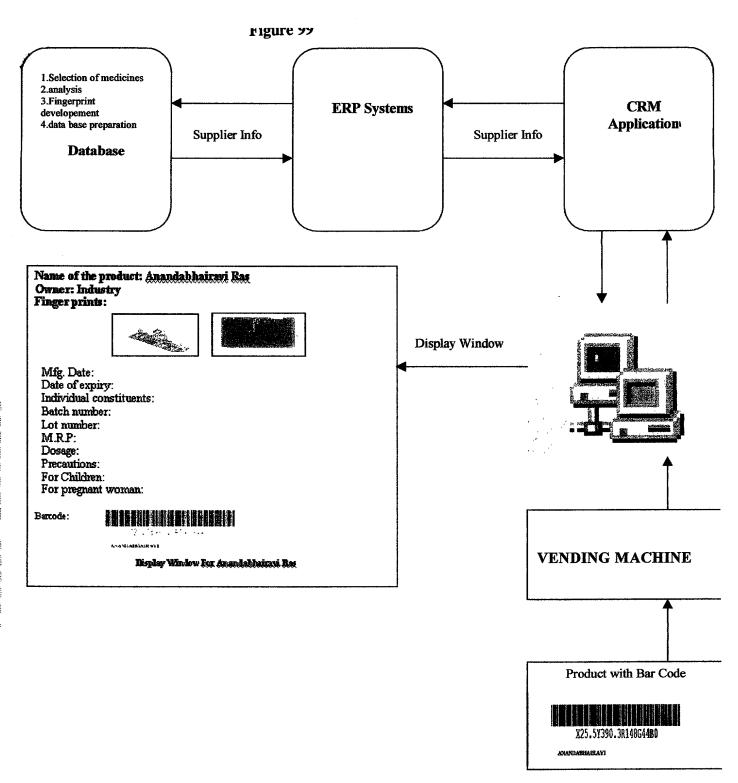
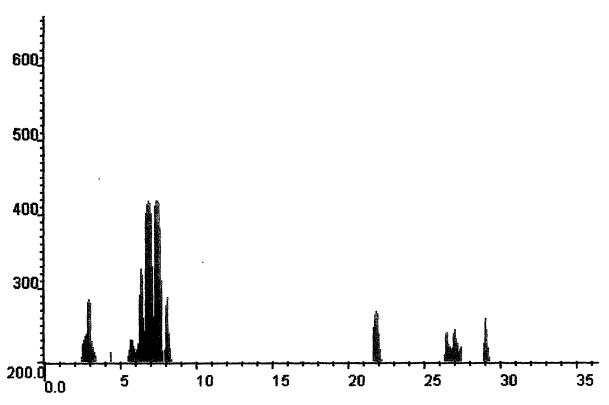


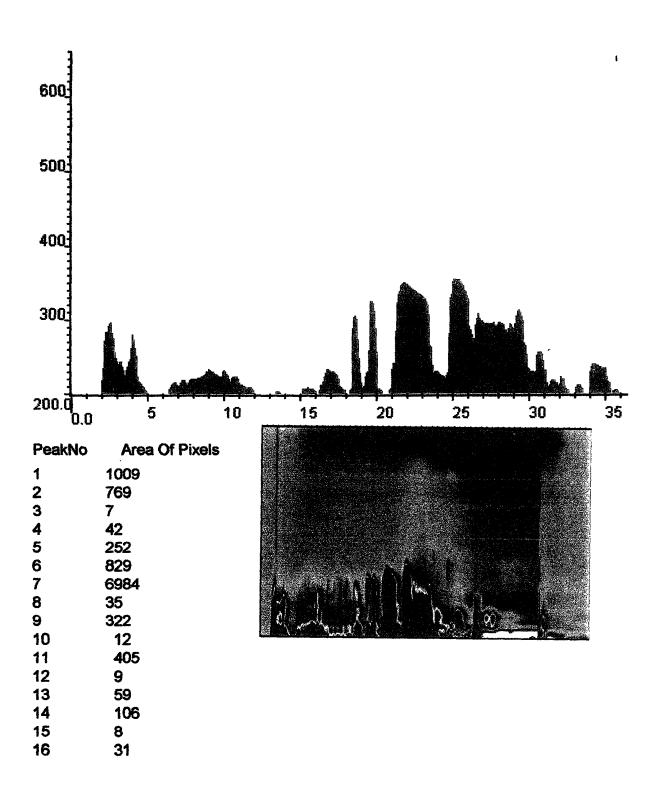
Figure showing the operational mechanism of the ERP and CRM network



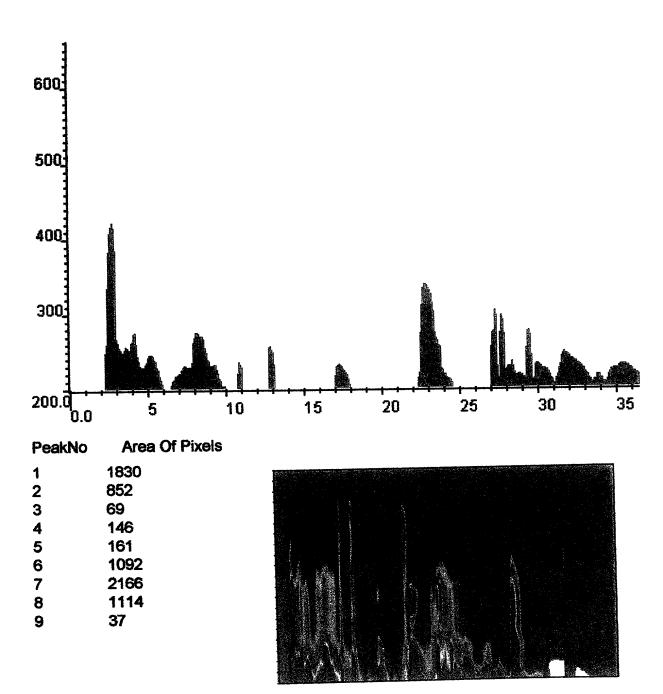
PeakNo	Area Of Pixels	
1	271	
2	8	
3	1818	
4	146	
5	181	
6	213	
7	91	

CHROMATOGRAM OF AZARDIRACTA INDICA (Tender leaves in February)

Figure 101

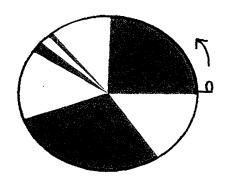


PIE DIAGRAM OF ANANDABHAIRAVI RAS



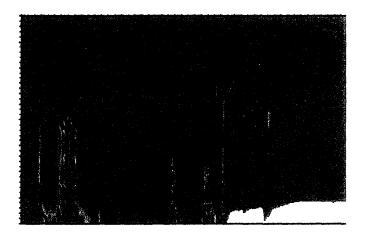
CHROMATOGRAM OF KRIMIKUTARA RAS

Figure 103



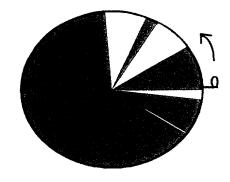
Peak 1	24.507833	%
Peak 2	11.410205	%
Peak 3	0.9240659	%
Peak 4	1.9552698	%
Peak 5	2.1561537	%
Peak 6	14.624347	%
Peak 7	29.007635	%
Peak 8	14.918977	%
Peak 9	0.4955136	%

Percentage of pixels represents the constituents.

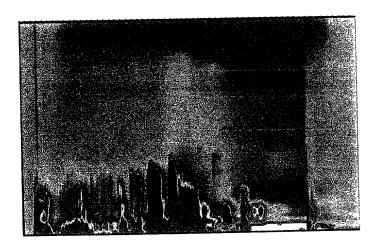


PIE DIAGRAM OF AZARDIRACTA INDICA (Tender leaves in February)

Figure 104

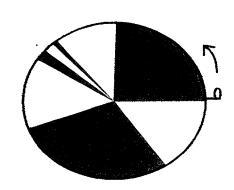


9.27475 %
7.0686646 %
0.06434415 %
0.3860649 %
2.3163893 %
7.620186 %
64.197075 %
0.32172075 %
2.9598308 %
0.11030425 %
3.7227685 %
0.08272819 %
0.54232925 %
0.97435427 %
0.07353617 %
0.28495267 %



PIE DIAGRAM OF ANANDABHAIRAVI RAS

Figure 105



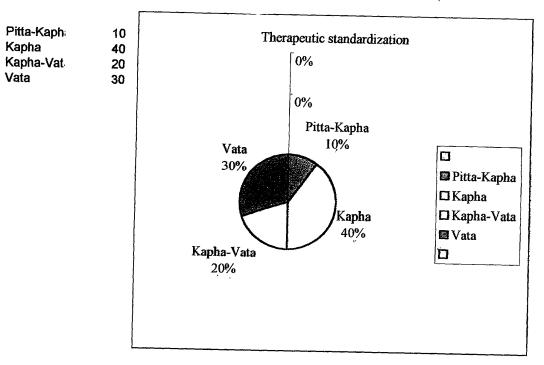
Peak 1	24.507833	%
Peak 2	11.410205	%
Peak 3	0.9240659	%
Peak 4	1.9552698	%
Peak 5	2.1561537	%
Peak 6	14.624347	%
Peak 7	29.007635	%
Peak 8	14.918977	%
Peak 9	0.4955136	%



PIE DIAGRAM OF KRIMIKUTARA RAS

Figure 106

Pixel values or percentage values from graphs.



This gives the efficacy of the medicine due to the constituents present in various zones of the fingerprint.

The values of pixels were taken generally and are not for a chromatogram. This figure only shows only how it appears.

Pitta 23
Pitta-Kaph 11
Kapha 11
Kapha-Vat 11
Vata 34
Vata-Pitta 11

Figure 107

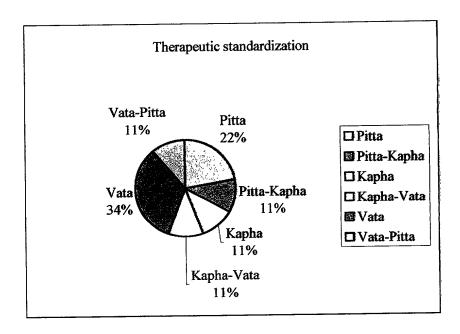
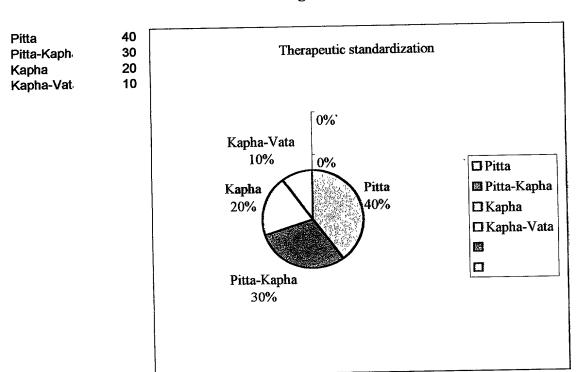
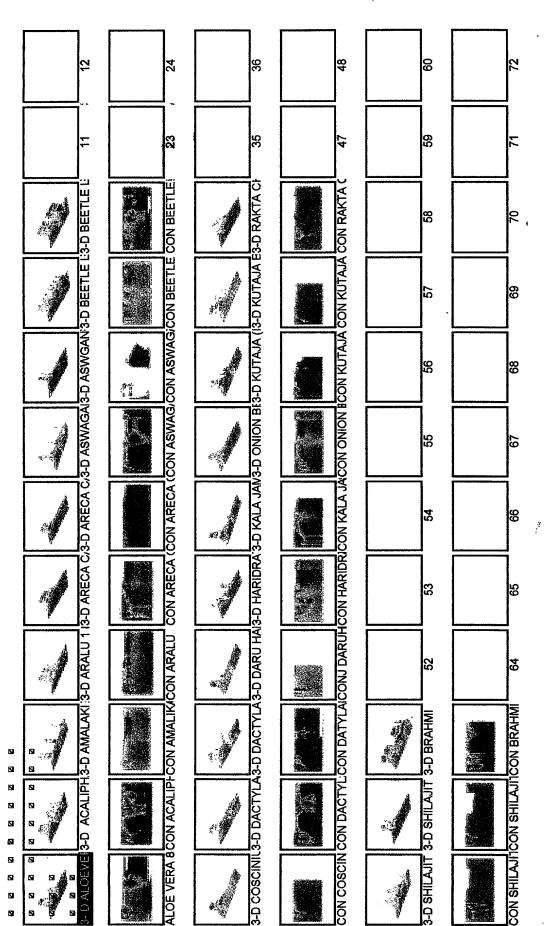


Figure 108

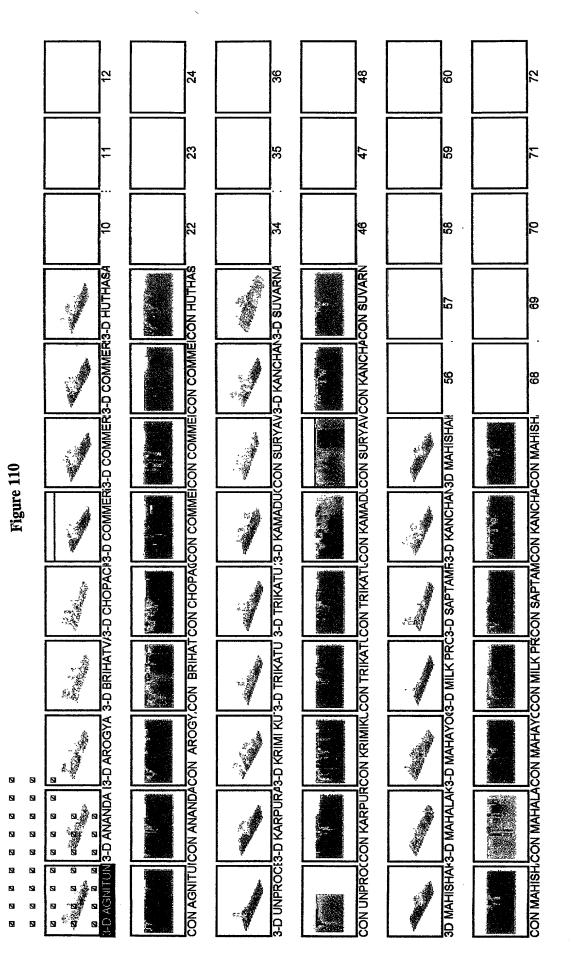


### A" Han Herr A" A" Herr H. H. 7. Figure 109 C:\W\INDOWS\DESKTOP\Director files\SINGLE PLANTS Ø 51 , 53 8 Ø Ø Ø 8 S



These libraries of 3d and contour images of medicines will be prepared as a database for various ERP and CRM applications. The 3d and Contour chromatograms are given in top and bottom lines.

Databases based on color, taste, odour, therapeutic value, phytochemical parameters can be prepared to understand the therapeutic efficacy of a specific batch/class of medicines. C:\\WINDOWS\\DESKTOP\\Director files\\HERBAL FORMULATIONS

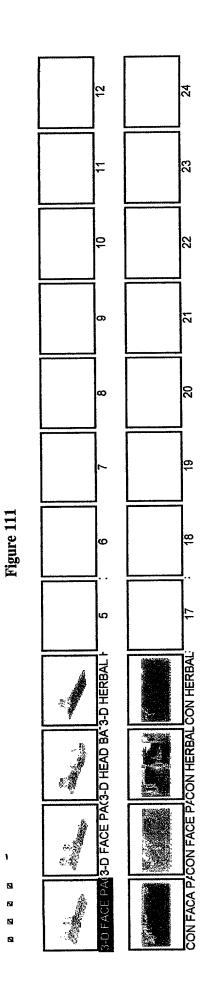


These will help the industry to monitor their product profile for the market and also for proper standarddization to prepare a formulation.

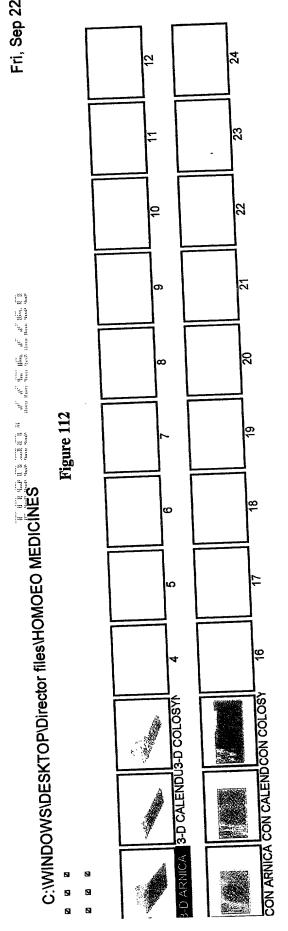
A. A. A. Mar. William A. A. W. Shing H. H. Berrer Sector Street Street Street

H. R. R. Carlot H. R. Annald H. H. Thr.

C:\WINDOWS\DESKTOP\Director files\COMMERCIAL SAMPLES

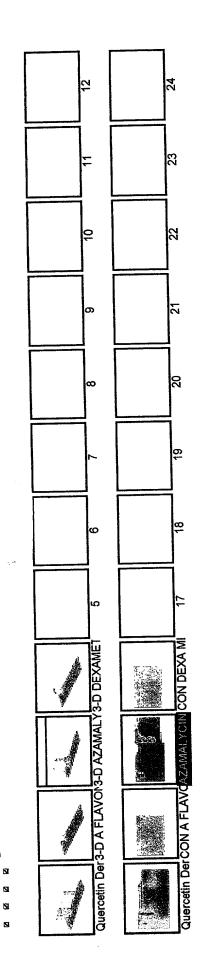


Example for adulterated cosmetic samples.



The fingerprint of Mother tincture only were done. They can be done to the level of femto gram level as the PDA detectives are very sensitive. Hence dilution can also be fingerprinted.

Figure 113

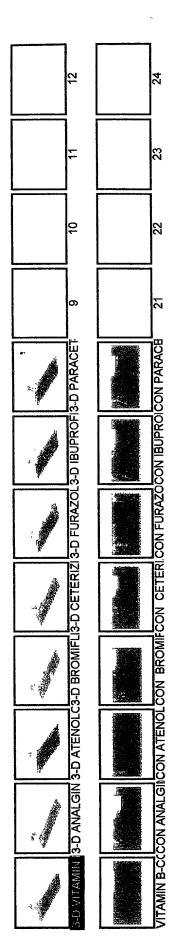


This helps to know the purity after isolation and to know the UV spectra of an unknown molecule.

# Mr. A. Mar. Hink, M. M. Hints H. K. Waller H. K. Marine Brain Vanit Strait States Strait States States C:\WINDOWS\DESKTOP\Director files\ALLOPATHIC MEDICINES

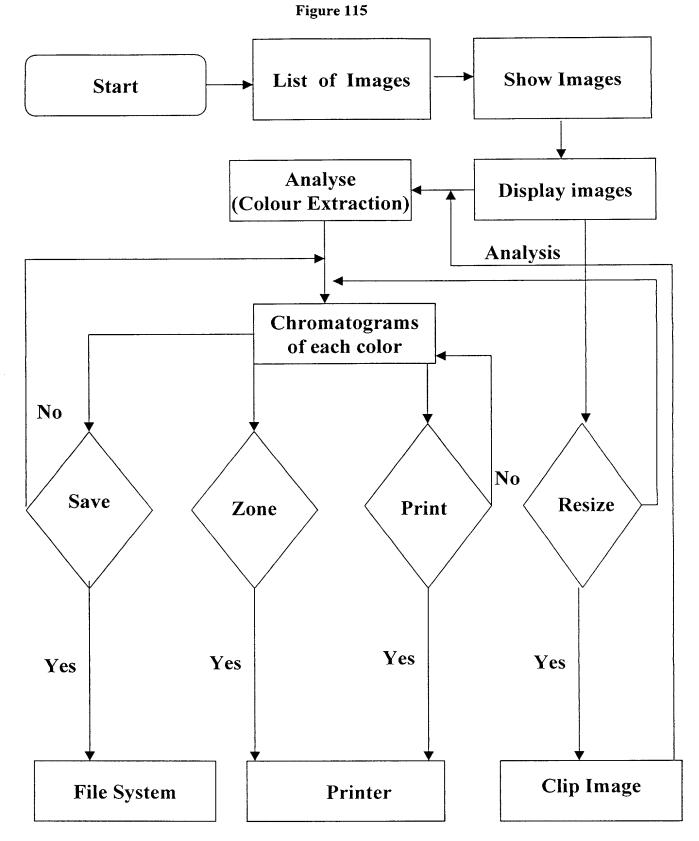
53 53

Figure 114



This method can be used for all allopathic medicinesfor chemical and therapeutic standardization.





OPERATIONAL SEQUENCE OF SOFTWARE